

GDF-1 RLRHTEPRVEGVPVGTCTRRRLHVSF-REVGWHRVVIAPRGFLANFCCGTCALPETLRGPGGPP
 GDF-3 RKRRAAISVPKGFGRNFCRHRQLFINF-QDLGWKHWIAPKGFMANVCHGECFPMITTYLNS---
 GDF-5 PLANRGKRPKNLKAQSRKALHVNFKDMGWDDWIIAPLEYEAFHCEGLCEFLRSHLEP---
 GDF-9 SFNLSEYFKQFLFPQNECELDHDFRLSF-SQLKWDNWIVAPHRYNPRYCKGDCPRAVRHRYS---
 BMP-2 REKRAKHQKRLKSSCKRHPLYVDF-SDVGWNDWIAPPGYHAFYCHGECFPLADHLNS---
 BMP-4 KRSPKHHSQARKNKNKRRHSLYVDF-SDVGWNDWIAPPGYQAFYCHGDCFPPLADHLNS---
 Vgr-1 SRGSGSDYNGSELKTAQCKHLYVSF-QDLGWQDWIIAPKGYAANYCDGECFPLNAHMNA---
 OP-1 LRMANVAENSSDQQAQCKKHELVSF-RDLGWQDWIIAPKGYAANYCEGECFPLNSYMNA---
 BMP-5 SRMSSVGDYNTSEKQAQCKKHELVSF-RDLGWQDWIIAPKGYAANYCDGECFPLNAHMNA---
 BMP-3 EQTLKKARRKQWTEPRNCCARRYLVDF-ADIGWSEWIIAPKGYAANYCDGECFPLPKSLKPS---
 MIS GPGRAQRSAGATAADGFCALRELSVDL----RAERSVLIPTQYANNCCGVCGWPGQSDRNPRY---
 Inhibin ALRLQRPPEEPAHANCHRVALNISF-QELGWERWIVYPPSFIHYCHGGGLHIPPLNSLPV-
 Inhibin HRRRRRGLECDGKV-NJCCKQFEVSF-KDIGWNDWIAPSGYHANYCEGECPSHAGTSGSSL-
 Inhibin HRIKRGLECDGRT-NLCRCQFFIDF-RLIGWNDWIAPTGYGNYCEGSCPAYLAGVPGSAS-
 TGF- β 1 HRRALDTNYCFSSTEKNCCVRQLYIDFRKDLGWK-WIHEPKGYHANFCLGPCPYIWSLD-----
 TGF- β 2 KKRALDAAYCFRNQDNCCLRPLYIDFRDLGWK-WIHEPKGYANFQAGACPYLWSSD-----
 TGF- β 3 KKRALDTNYCFRNLEENCCVRPLYIDFRQDLGWK-WVHEPKGYANFQSGGPPYLRASD-----

GDF-1 ALNHAVALRALMHA-AAPTPGAGSPCCV--PERLSPISVLFF-DNSDNVVLRYHEDMVVDECCGCR
 GDF-3 -SNYAFMQALMHM----ADPKVPKAVCV--PTKLSPI SMLYQ-DSDKNVILRHYEDMVVDECCGCG
 GDF-5 -TNHAVIQTLMNS--MDPESTPTTCV--PTRLSPI SILFI-DSANNVYKQYEDMVVESCCGCR
 GDF-9 -PVHTMVQNTIYE--KLDPSVPRPSCV--PGKYSPLSVLTI-EPDGSIAKEYEDMIATRCITCR
 BMP-2 -TNHAI VQTLVNS---VNSKIPKACCV--PTELSAISMLYL-DENEKVLKNYQDMVVEGCGCR
 BMP-4 -TNHAI VQTLVNS---VNSIIPKACCV--PTELSAISMLYL-DEYDKVLKNYQDMVVEGCGCR
 Vgr-1 -TNHAI VQTLVHL--MNPEYVPKPCA--PTKLN AISVLYF-DDNSNVI LKKYRNMMVVRACGCH
 OP-1 -TNHAI VQTLVHF--INPETVPKPCA--PTQLN AISVLYF-DDSSNVI LKKYRNMMVVRACGCH
 BMP-5 -TNHAI VQTLVHL--MFPDHVPKPCA--PTKLN AISVLYF-DDSSNVI LKKYRNMMVVRSCGCH
 BMP-3 --NHATI QSI VRA--VGVVPGIPEPCV--PEKMSSLSILFF-DENKNVLKVYPNMTVESACACR
 MIS -GNHVLLKMQA--RGAAALARPCCV--PTAYAGKLLISLSEER--ISAHVPNMVAETECGCR
 Inhibin -PGAPPTPAQPS----LLPGAQPCCAALPGTMRPLHVRTSDGYSFKYETVPNLLTQHCACT
 Inhibin -SFHSTVINHYRMGRHSPFANLKSCCV--PTKLRPMSMLY--DDGONI KKDIGNMIVEECGCS
 Inhibin -SFHTAVVNQYRMGRINPGT-VNSCCI--PTKLSTMSMLYF-DDEYNIVKRDVPMNIVEECGCA
 TGF- β 1 -TQYSKVLALYNT--HNPGASAPCCV--PQALEPLPIVYV-VGRKPKV-EQLSNMIVRSCKCS
 TGF- β 2 -TQHSRVLSLYNT--INPEASAPCCV--SQDLEPLTILYY-IGKTPKI-EQLSNMIVKSKCS
 TGF- β 3 -TTHSTVLGLYNT--LNPEASAPCCV--PQDLEPLTILYY-VGRTPKV-EQLSNMIVKSKCS

FIG. 3A

SEQ ID NO:28	GDF-5	371	R	R	K	R	R	A	P	L	A	N	R	Q	G	K	R	P	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	395	K	N	L	K	A	R	C	S
SEQ ID NO:29	GDF-6		R	R	R	R	R	T	A	F	A	S	R	H	G	K	R	H	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		K	S	R	L	R	C	S		
SEQ ID NO:30	GDF-7		R	R	R	R	R	T	A	L	A	G	T	R	G	A	Q	G	S	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G		A	G	R	G	R	R	G	S

GDF-5		396	R	K	A	L	H	V	N	F	K	D	M	G	W	D	D	W	I	I	A	P	L	E	Y	E	A	F	H	C	E	G	L	C	E	F	P	L	R	S	H	L	E	P	T	N	H	A	V	I	Q	T	L
GDF-6			R	K	P	L	H	V	N	F	K	E	L	G	W	D	D	W	I	I	A	P	L	E	Y	E	A	Y	H	C	E	G	V	C	D	F	P	L	R	S	H	L	E	P	T	N	H	A	I	I	Q	T	L
GDF-7			R	K	S	L	H	V	D	F	K	E	L	G	W	D	D	W	I	I	A	P	L	D	Y	E	A	Y	H	C	E	G	V	C	D	F	P	L	R	S	H	L	E	P	T	N	H	A	I	I	Q	T	L

GDF-5		447	M	N	S	M	D	P	E	S	T	P	P	I	C	C	V	P	T	R	L	S	P	I	S	I	L	F	I	D	I	S	A	N	N	V	V	Y	K	Q	Y	E	D	M	V	V	E	S	C	G	C	R
GDF-6			M	N	S	M	D	P	G	S	T	P	P	S	C	C	V	P	T	K	L	T	P	I	S	I	L	Y	I	D	A	G	N	N	V	V	Y	K	Q	Y	E	D	M	V	V	E	S	C	G	C	R	
GDF-7			L	N	S	M	A	P	D	A	A	P	A	S	C	C	V	P	A	R	L	S	P	I	S	I	L	Y	I	D	A	A	N	N	V	V	Y	K	Q	Y	E	D	M	V	V	E	A	C	G	C	R	

FIG.3B

FIG. 4

GDF-1	100	33	50	46	44	48	35	27	42	43	46	47	46	34	MIS	Inhibin α	Inhibin βA	Inhibin βB	TGF- $\beta 1$	TGF- $\beta 2$	TGF- $\beta 3$
GDF-2	-	100	42	47	51	48	31	32	52	51	55	52	55	20	BMP-3				32	28	30
GDF-3	-	-	100	49	49	46	41	33	53	50	53	50	50	22	BMP-5				36	31	32
GDF-5	-	-	-	100	86	50	37	33	57	57	51	51	52	27	OP-1				33	34	37
GDF-6	-	-	-	-	100	50	38	34	57	56	53	53	54	26	Vgr-1				35	36	38
GDF-7	-	-	-	-	-	100	37	33	57	57	52	53	52	25	BMP-4				36	35	38
GDF-8	-	-	-	-	-	-	100	27	41	38	45	42	42	31	BMP-2				34	37	37
GDF-9	-	-	-	-	-	-	-	100	33	34	31	30	31	29	GDF-8				23	25	25
BMP-2	-	-	-	-	-	-	-	-	100	92	61	60	61	48	GDF-9				35	34	36
BMP-4	-	-	-	-	-	-	-	-	-	100	60	58	59	47	BMP-5				34	33	35
Vgr-1	-	-	-	-	-	-	-	-	-	-	100	87	91	44	OP-1				35	37	39
OP-1	-	-	-	-	-	-	-	-	-	-	-	100	88	42	BMP-1				34	38	38
BMP-5	-	-	-	-	-	-	-	-	-	-	-	-	100	43	BMP-5				34	35	36
BMP-3	-	-	-	-	-	-	-	-	-	-	-	-	-	100	BMP-3				32	32	32
MIS	-	-	-	-	-	-	-	-	-	-	-	-	-	100	MIS				28	23	25
Inhibin α	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Inhibin α				23	22	24
Inhibin βA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Inhibin βA				41	37	36
Inhibin βB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Inhibin βB				35	34	37
TGF- $\beta 1$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TGF- $\beta 1$				100	74	78
TGF- $\beta 2$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TGF- $\beta 2$				100	82	100
TGF- $\beta 3$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TGF- $\beta 3$				100	100	100

FIG. 5A



FIG. 5B



FIG. 5C

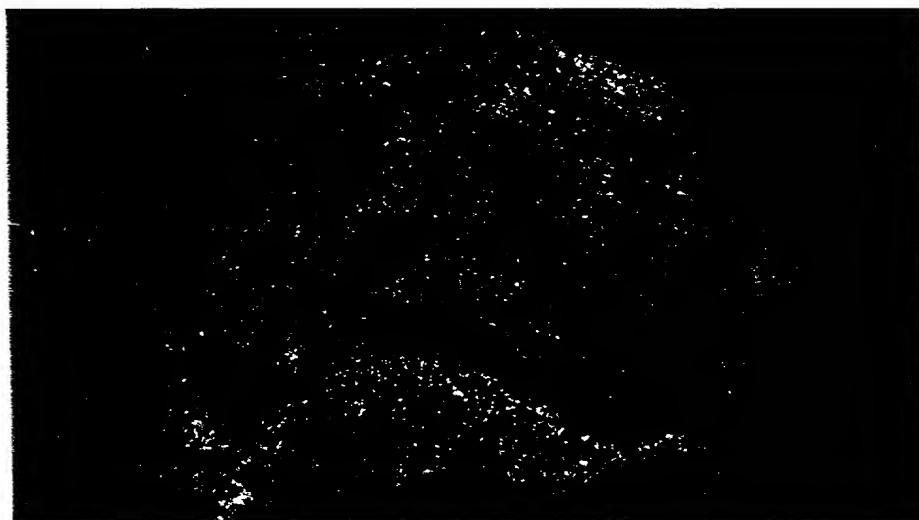


FIG. 5D

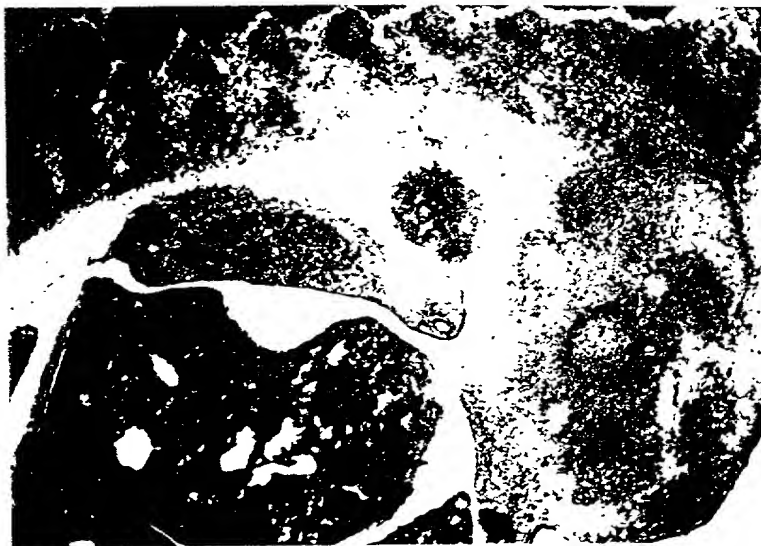


FIG. 5E

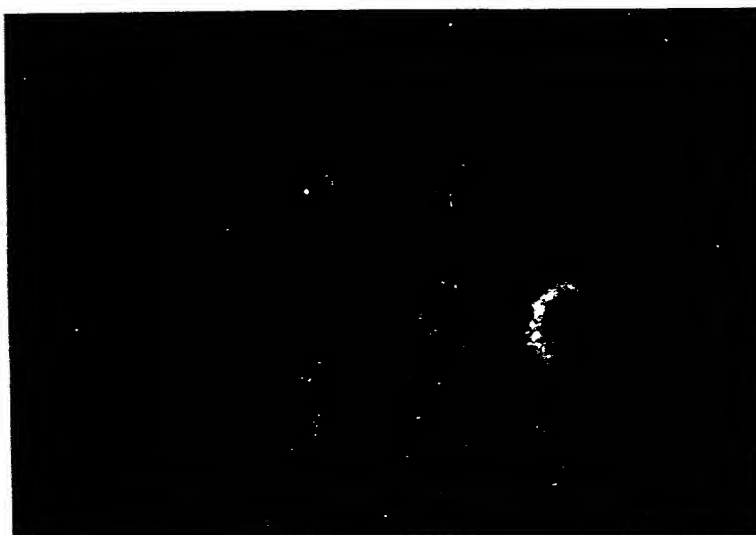
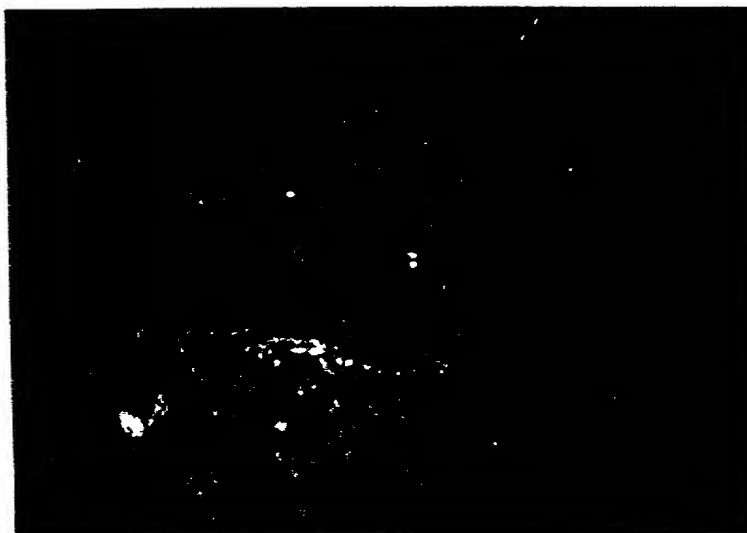


FIG. 5F



[illegible]

FIG. 6A

4 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



FIG. 6B

A high-contrast, black and white photograph of a person's face, heavily shadowed and distorted, appearing to be in a state of distress or agony. The image is characterized by extreme contrast, with deep blacks and bright whites, giving it a graphic, almost abstract quality. The features are partially obscured by shadows, and the overall composition is tightly cropped, focusing on the central part of the face.

FIG. 6C